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GRAND JUNCTION DISTRICT
GRAND JUNCTION RESOURCE AREA

Ruby Canyon/Black Ridge
Integrated Resource Management Plan

Environmental Assessment

May 1997

2815 H Road
Grand Junction, CO 81506
PH: (970)244-3000

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1997b

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Grand Junction Resource Area
2815 H Road
Grand Junction, Colorado 81506

TAKE PRIDE IN AMERICA

IN REPLY REFER TO:

1617(CO-076)

JUL 18 1997

Dear Interested Citizen:

Enclosed for your review and comment are the Draft Ruby Canyon/Black Ridge Integrated Resource Management Plan and Environmental Assessment. This plan will establish the management objectives, management prescriptions as well as the management actions for this area. The Draft Ruby Canyon/Black Ridge Guide Book for Prescribed Natural Fire (Natural Ignition) Planning and Implementation is also enclosed for those that have requested it. The Guide Book describes how fire will be managed for this area.

There will be a 30 day public comment period starting July 18th. In addition, an open house will be held to discuss this plan with the public. The open house will be held at the BLM office in Grand Junction on August 7th from 3:00 to 8:00 p.m. The open house will give an opportunity for the public to discuss the plan one on one with the BLM staff and if needed provide written comments.

For those of you that have served on the Ad hoc committee, I would like to extend my sincere thanks for your willingness to stick with the process these many long years and in helping us craft what many consider to be a landmark plan. We look forward to your continued involvement as we move into the implementation and monitoring phase of the process.

Sincerely,

Catherine Robertson

Catherine Robertson
Area Manager

3 Enclosures
1 - Draft Ruby Canyon/Black Ridge Plan
2 - Environmental Assessment
3 - Draft Guide Book for Prescribed Natural Fire

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Bureau of Land Management
Grand Junction Resource Area

Ruby Canyon/Black Ridge
Integrated Resource Management Plan

Environmental Assessment

EA-CO-076-96-15

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I. INTRODUCTION

Purpose and Need for the Proposed Action

The purpose of the Proposed Action is to meet human needs by providing a diversity of benefit opportunities including commodity production, recreation and ecosystem health. The Proposed Action is the adoption and implementation of the Ruby Canyon/Black Ridge (RCBR) Integrated Resource Management Plan (IRMP). The need for the Proposed Action is to promote biodiversity and sustainable ecosystems while meeting human needs for a variety of uses such as high quality recreation activities and grazing.

The Proposed Action is based on the objectives and management actions required to address the issues identified for the Ruby Canyon/Black Ridge planning area. The plan spells out a vision statement, identifies management goals and outlines a series of management objectives, management prescriptions, and management actions to achieve these goals. The purpose of this EA is to document the potential environmental impacts of implementing the proposed RCBR Integrated Resource Management Plan and alternatives to assure compliance with the National Environmental Policy Act (NEPA). Key management actions in the plan are analyzed to the degree possible for the level of detail known. If needed, more site-specific, project-specific, and detailed EA's will be completed by the BLM when more project-related information is developed.

Further information on the purpose and need for the Proposed Action can be found in the "Background and Introduction" and Chapter 3 sections of the RCBR Plan.

Conformance with the Land Use Plan

The proposed Ruby Canyon/Black Ridge Integrated Resource Management Plan has been reviewed to determine if it conforms with the land use plan terms and conditions as required by 43 CFR 1610.5. It has been found to be in conformance with the Grand Junction Resource Area Resource Management Plan (RMP) and Final Environmental Impact Statement completed in January of 1987. Although the RMP provided management direction on several key components of this area (e.g. recreation, wilderness, OHV's etc.), the need for additional planning for this area was recognized, and a commitment was made to develop detailed management prescriptions for the RCBR ecosystem with the involvement of the public and other resource management agencies. The Grand Junction RMP will be amended to reflect those activities that change or add to the existing management.

Relationship To Statutes, Regulations, or Other Plans

Existing legislation and plans were used to provide base information and guidance for the RCBR Plan. The Federal Land Policy and Management Act (FLPMA) of 1976 mandates the BLM manage the public lands for multiple use on a sustained yield basis. The Grand Junction Resource Area RMP and Final Environmental Impact Statement guides management of public lands administered by this resource area including the RCBR ecosystem. Various program specific activity plans dealing with recreation, wilderness, wildlife, water quality, cultural resources, fire and range have guided management actions in this ecosystem in the past. Management direction from all of these plans is presently guiding the various land uses in the RCBR ecosystem. Guidance from these activity plans will continue to be followed unless otherwise amended in this plan in order to meet objectives identified for the RCBR area.

II. DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

The Proposed Action, and two management alternatives; Primitive Recreation (A), and the No Action (B), are being considered in this EA. Other alternatives, or parts of alternatives were developed, and found not to differ from the proposed plan so much as to require that they be addressed separately in this EA. Based on public comment, the final decision made to implement the plan may be composed of any of the alternatives in their entirety or can consist of portions of the three alternatives.

The Proposed Action

The proposed action is the adoption and implementation of the Ruby Canyon/Black Ridge IRMP. The objectives and proposed management actions in the plan were developed through the efforts of a BLM interdisciplinary team working in conjunction with an "Ad-hoc" committee consisting of a wide variety of other local, state and federal government representatives, business owners, grazing permittees, outfitters and guides, and a variety of user group representatives and concerned citizens. They reflect a policy of promoting human use with minor risk to natural values and no significant risk to the critical elements (listed on page 12). The EA reviews the impacts of implementing the management actions proposed in the plan.

By consensus, the "Ad-hoc" committee identified both a "vision statement" and overall management goals for the RCBR area. They are as follows:

Vision Statement

The Ruby Canyon/Black Ridge Ecosystem will continue to contribute to the current quality of life for the Grand Valley and will be managed for an ideal balance of use and preservation.

Community/Partnership Vision

- The community will work together to educate visitors about back-country manners and respect for other users so that opportunities for positive experiences can be sustained.

- Partners with tourism organizations will foster user ethics and help to meet other goals including maintaining use at a level that does not exceed the carrying capacity of the area.

Area Vision

- The area will help contribute to a sustainable and stable economy while the community preserves the area's environmental health.

- Most of the area will be kept "wild", but people will be able to drive on well-defined roads and trails in some places.

General Management Goals

1. Manage the ecosystem to achieve targeted individual, social, economic and environmental benefits.

2. Manage to deliver benefits by maintaining opportunities for visitors to engage in a diversity of targeted activities in a variety of settings.

3. Maintain and enhance partnerships with other land managing agencies, user groups, community and tourism organizations to help maintain the health of the ecosystem and to provide on-site opportunities for RCBR visitors to realize desired experiences and benefits.

4. Manage the historical, cultural and paleontological resources in the ecosystem for scientific information, education, public values and conservation.

5. Manage the Black Ridge Canyons Wilderness Study Area to protect wilderness values.

6. Continue to acquire lands within the ecosystem to provide for better natural resource and public use management, and to eliminate incompatible land uses on private land inholdings.

7. Attain diverse habitats (forage, cover, water) and functioning watersheds by enhancing the ecological processes to achieve the desired plant communities, improve water quality and reduce soil erosion.

8. Provide for a rural environment that contributes to a sustainable economy in harmony with ecological and environmental health.

9. Educate the public on management actions and their desired effect on ecological processes.

10. Provide an aesthetically pleasing landscape which is compatible with the diverse uses.

11. Protect, promote and enhance native wildlife, rare plants and their habitats on an opportunity basis, yet in priority order from globally, to nationally rare species, to locally popular species.

12. Consistently present archaeological, wildlife, and rare plant information in the ecoregional context, i.e., the Great Basin/Intermountain Desert and the Colorado Plateau.

The management objectives for the RCBR area for recreation, vegetation, soil, water, air, wildlife and the cultural resource are contained on the following pages of chapter 5 in the Plan:

North of the River: 5-4, 5-9, 5-14, 5-17, 5-21, 5-23, 5-25, and 5-26.

The Colorado River: 5-29, 5-35 through 5-39.

South of the River: 5-42, 5-46, 5-51, 5-56, 5-58, and 5-60.

Key management actions being proposed in the Plan (chapter 5) are summarized below for each of the categories mentioned above. Those management actions that appear in **bold** print are those actions that change or add to the existing management direction as contained in the 1987 Resource Management Plan. Included among the management actions under vegetation are plans to introduce a "Prescribed Natural Fire" (PNF) program in the area south of the river. A PNF program involves allowing fire to play as natural a role as possible to maintain the mosaic of ecological and successional vegetative types.

Recreation

- Construct simple wayside interpretive exhibits at seven key locations in Rabbit Valley.

- Expand single-track trail system in Rabbit Valley and in the area between I-70 and M.8 road (old Hwy. 6&50).

- Expand the designated route system to include the area between I-70 and M.8 road, the area north of the river between Salt Creek and Loma, and the area south of the county road and north of the WSA boundary in Kodels and Devils Canyon.cation to no more than 7 consecutive nights.

- Limit camping in the same location to no more than 7 consecutive nights.

- Maintain and extend the existing Trail Thru Time to add another Loop to provide universal accessibility.

- Improve and harden the undeveloped parking area on the frontage road behind the I-70 weigh station and on the newly acquired Horsethief property.

- Limit the size of groups travelling through the Mary's and Lion's Loop areas to no more than 25 people.

- Expand the single-track mountain bike trail opportunities in the Mary's and Lion's Loop area.

- Prohibit motorized and mechanized access to the river bottom on the newly acquired Horsethief properties.

- Remove tamarisk at key sites along the river to create new undeveloped camping and lunch sites.

- Consider designating the river corridor between Loma and Westwater as a "Special Area", and charge a fee for all floaters (excludes commercial groups because they currently pay a fee).

- Direct allocation of river use would only be undertaken after all indirect measures (e.g., including education, information, facility construction to ease pressure off of high use areas and high use periods etc.) are exhausted.

- Manage the river corridor to allow encounters of up to but not exceeding 15 other groups per day.

- The Upper Bench and lower Black Ridge roads will be the primary access routes to the arches and will be managed as follows:

1. The Upper Bench road will be opened to all motorized vehicles from April 15 to August 15 only. Open remainder of the year to hikers, bikers and horses.

2. The lower Black Ridge road will be opened to all motorized vehicles from August 15 to February 15 only. Open remainder of the year to hikers, bikers, and horses.

Both routes will be closed to motorized vehicles from February 15 to April 15.

- Construct two parking areas along the Upper Bench Road as trailheads and construct hiking trails from them to the upper portions of Pollock and Devils Canyons.

- Construct and designate a parking area and trailhead at the intersection of the Black Point Road and Mee Canyon Trail.

- Gate the road west of Mee Canyon trailhead to reduce trespass onto privately owned lands and control vehicles in the WSA.

- Limit the size of the group travelling to the arches to 12 people.

- Prohibit overnight parking along the Ute Trail (cherry-stem road).

- Continue to allow mountain bike use on the Pollock Bench Trail. In conjunction with COPMOBA, implement a permit system for bikers using the trail.

- Develop a loop trail into the Pollock Canyon Complex through the upland areas and where feasible, down into Pollock and Devils Canyons from the two Upper Bench Road access points.

- Develop a Devils Canyon Outdoor Classroom at the mouth of Devils Canyon consisting of a series of nature trails, a natural amphitheater, and a restroom.

- Manage Flume, Devils and Kodels Canyons for nonmotorized use only.

- Manage Flume Canyon for hiking and equestrian use only.

- Develop a single track mountain bike loop in the non-wilderness portion of Devils Canyon.

- Establish a no shooting zone in Kodels and Devils Canyons between the river southwest of Fruita and the Pollock Bench trailhead.

- Recommend 200 acres of recently acquired lands in Devils Canyon (1992), and 280 acres of recently acquired lands in Flume Canyon (1996), and 290 acres along the Colorado River as suitable for wilderness designation as part of the Black Ridge Canyons WSA (73,937 acres) which was recommended as wilderness to Congress in 1991. Recommend 440 acres in Devils Canyon and 40 acres in Flume Canyon as nonsuitable for wilderness.

Archaeologic-Historic-Paleontological

- Continue networking with archaeological, historical, and paleontological interests.

- Continue working with the Museum of Western Colorado and Dinamation International Society in assembling an archaeological and paleontological overview of the GJRA (includes the RCBR area).

- Work with partnerships to educate the public about appropriate uses of archaeological, historical, and paleontological resources.

- Maintain interpretive trails in Rabbit Valley, at nearby Dinosaur Hill, and possibly consider one or more new trails either interpreted, or used with a guide (Split Rock, Fruita Paleontologic Area, etc.).

- Promote use of the GJRA "Fossil Education Kit" and the archaeological education program developed by Anasazi Heritage Center, within and by local community groups.

- Encourage archaeologists, historians, and paleontologists with existing or potential research interests in the area.

Vegetation

- Develop activity plans which include grazing strategies that promote the Desired Plant Community (DPC).

- Plan for dormant season use and/or spring use that provides periodic rest during the critical growth period when possible to increase perennial vegetation.

- Encourage management practices that decrease the abundance of cheatgrass and increase the amount of perennial vegetation.

- Encourage management practices which create and/or maintain diverse vegetative communities for forage and cover, e.g. seed mixtures that would compliment the DPC.

- Develop a Prescribed Natural Fire Plan and a Prescribed Fire Plan (management ignited) that will be used to maintain the mosaic of ecological and successional vegetative types and achieve the DPC.

- Increase Fire Management Activities in the river corridor to reduce fuel loads that threaten desired vegetative communities.

- Maintain existing livestock agreements that eliminate livestock use in certain canyon bottoms and sheep use in desert bighorn ranges.

- Approximately 15 acres of tamarisk control would be done along the river with ground crews lopping tamarisk and painting the stumps with a short-lived herbicide and planting desirable native riparian woody plants. The shrubs on berms blocking the best river backwater channels would be targeted.

- Approximately 10 acres of knapweed control would be done and seeded to native warm-season, perennial grass as an experiment and if safe and successful up to 25 acres would be done.

- Utilize management activities that favor maintaining or creating deer habitat and discourages elk use of the area.

- Utilize management activities that protect cottonwood galleries along the Colorado River.

- Develop tools for educating the public on the ecological processes and the relationship to the diverse uses.

Soil, Water and Air

- Minimize recreational impacts to upland and riparian vegetation.

- Utilize wildlife and livestock grazing strategies that enhance vegetative cover.

- Encourage management practices that reduce the effects of surface disturbance such as rehabilitation of disturbed areas, reseeding following fire (when appropriate), implementation of "Best Management Practices", and maintenance of sediment control structures.

- Utilize and/or restrict fire as appropriate to maintain a mosaic of ecological and successional vegetative types.

- Maintain air quality standards.

Wildlife and Threatened & Endangered Species

- Install six visually obscure water catchments (guzzlers) to improve the distribution of small game in the area north of the river.

- Protect the two sensitive plant species, *Cryptantha osterhoutii* and *Amsonia jonesii* by vigilantly preventing trail formation near these plants and steering ground disturbing activities away from the sites.

- All cliffs that are or have been occupied by peregrine falcon eyries will be closed to trail use on the tops and rock climbing from March 15 to July 15. Waive this restriction after April 15 in the years the cliff is unoccupied.

- Open the potential black-footed ferret habitat in the Rabbit Valley area and lands adjacent to the Grand Valley Desert to the north for the establishment of a viable population of black-footed ferrets and cooperate in the release preparation procedures.

- Close Chow Doggone Island to overnight camping to maintain its suitability for nesting bald eagles.

- If it continues to look feasible, a channel on the north side of the river will be dredged to create shallow backwater through a significant span of river heights.

- To protect desert bighorn sheep, discourage hiking in Devils Canyon during the spring lambing season (April 1 - June 1).

- Support the Colorado Division of Wildlife in encouraging a high harvest rate of deer, elk, and mountain lions in this area for a reduced competition, disease transmission and predation on the desert bighorn sheep population.

- Helicopter access to peregrine eyrie sites and desert bighorn sheep handling sites will be allowed until the WSA is designated as wilderness.

ALTERNATIVE A - Primitive Recreation Emphasis

This alternative is the same as the Proposed Action with the following exceptions:

- Group size on the river would be limited to no more than 15 people. This would apply to commercial and non-commercial parties. For commercial parties this limit would include guides.

- Mountain bikes will be prohibited from using the Pollock Bench Trail.

- No further trails would be constructed within the WSA.

- The entire length of the Black Ridge Road would be closed year round to motorized vehicles, including the cherry-stem road or "Ute Trail". The upper bench road would become the primary access route to reach the Rattlesnake Arches. A new trailhead would be developed on the upper bench to accommodate vehicle parking for visitors seeking to hike the three miles to the arches.

- Prohibit the use of all motorized watercraft on the river during the primary float season (May 1 through September 30).

ALTERNATIVE B - No Action

Current conditions and values would be maintained under this alternative. The RCBR area would continue to be managed under a variety of management plans, including 10 Allotment Management Plans, one Habitat Management Plan, one Fire Management Plan, two Research Natural Area Plans, one Watershed Activity Plan, one Cultural Resource Management Plan, one Off Highway Vehicle Plan, and two Recreation Management Plans. These multiple existing management plans often conflict with each other, and are limited in scope, often only focusing upon one resource, rather than the ecosystem as a whole. Generally, by utilizing existing management, the Benefits Based Management (BBM) approach and DPC Inventory would not be used since most of these existing plans were formulated prior to the new trend of utilizing these state of the art management approaches.

By maintaining existing management, a "Limits of Acceptable Change" recreation management system utilizing a series of indicators and standards as a means to maintain acceptable social and physical conditions on the river would not be put in place. In other recreation areas, a variety of staging areas, trails and trailheads would not be constructed to help meet BBM management objectives. The use of prescribed natural fire in the area south of the river would also not be able to be used to achieve DPC objectives.

Under this alternative, the BLM would continue to protect wildlife and rare plants by measures developed "in-house" with less public review than the Proposed Action offers. Development of educational devices and wildlife habitat improvements would occur extemporaneously and be given low priority. Less education of the public, focusing on the wildlife and rare plants of this area would occur.

Under this alternative, none of the recently acquired lands in Devils and Flume Canyons and along the river would be recommended for wilderness. The 640 acres in Devils Canyon and 320 acres in Flume Canyon would be managed for semi-primitive, non-motorized recreation use. Mountain bikes would be allowed on designated trails in the mouth of Devils Canyon (440 acres).

III. AFFECTED ENVIRONMENT

A description of the affected environment can be found on pages 2-1 through 2-10 in the proposed Ruby Canyon Black Ridge Integrated Resource Management Plan.

IV. ENVIRONMENTAL IMPACTS

The following critical elements of the human environment have been analyzed under the Proposed Action and two alternatives. The table below reflects a range of impacts from very slight to more extensive in scope. Other important impact categories will be discussed in this document due to the nature and scope of the Proposed Action.

Critical Element	Present		Affected	
	Yes	No	Yes	No
Air Quality	X		X	
ACECs	X		X	
Cultural Resources	X		X	
Farmlands, Prime/Unique		X		X
Floodplains, NRCS defined	X		X	
Native American Religious Concerns		X		X
Wilderness	X		X	
T&E Species	X		X	
Wastes, Hazardous/Solid		X		X
Water Quality	X		X	
Wetlands/Riparian Zones	X		X	
Wild & Scenic Rivers		X		X

There are two kinds of impacts discussed in this EA. (1) Short term, direct impacts are those impacts which are caused by the action and occur at the same time and place as the action; and (2) long term, indirect impacts are those impacts which are caused by the action and occur later in time or are farther removed from the action in distance. Long term impacts take into account reasonably foreseeable scenarios.

Impacts of the Proposed Action

Impacts to Recreation and Visual Resources

Implementing the BBM system and other recreation management systems such as the Limits of Acceptable Change (LAC) will provide consistent methods to use in measuring key elements of the physical and social environment in helping to achieve stated objectives. Implementing the management prescriptions as outlined in Chapter 5 will provide a diversity and variety of recreational opportunities in the RCBR area based on the Recreation Opportunity Spectrum (ROS) classes to be managed for.

Recreational users of the area would be impacted by having better guidance and interpretation provided by the BLM and its partners so they could make informed decisions about destinations in the RCBR area. Users with varying degrees of skills would be directed to the appropriate destinations which match their skill level and desired benefit opportunities.

The rehabilitation and/or realignment of roads and trails when resource damage is occurring, could lead to impacts through a net increase in acreage disturbed, and potential impacts to visual resources until such time as old segments of roads and trails are recovered. The realignment of roads and trails when resource damage is occurring would also cause impacts in the long term by being beneficial to visual qualities of the RCBR area by reducing unsightly erosion, etc.

Seasonal closures of sections of roads, such as the Black Ridge Road, could in some cases cause impacts by impairing access by vehicles into areas used by visitors. In addition, the potential limiting of group sizes, requiring trail use permits (Pollock Bench), use fees (Ruby Canyon), and closing areas to overnight parking (Ute Trail), all to reduce unacceptable resource conditions from occurring in areas of concentrated use could initially inconvenience or preclude some users from using the RCBR area for recreation.

Implementation of the above restrictions would also cause beneficial impacts by reducing the chances of unacceptable resource damage occurring in areas of concentrated use, and lead to long term improvement of visitor experiences and the realization of targeted benefits in the RCBR area.

Vegetative manipulations in pinyon/juniper areas through the use of prescribed fire and prescribed natural fire could lead to direct, short term impacts to visual resources. Dead trees, shrubs, brush and burned areas may impair landscapes in the short term. Vegetation manipulations through the use of fire would have no long term, indirect impacts to visual resources due to future revegetation of the sites with grass, forb, shrub and tree species.

There could be an inconvenience to some recreation users by geographic displacement from their intended area due to an active fire. Impacts in terms of number of trails, miles of trails involved, or amount of heavily used areas affected at one time will be identified and addressed in each prescribed fire plan.

Impacts to the Wilderness Study Area

Enlarging the trail system in the Pollock and Devils Canyons complex and constructing trailhead facilities along the Upper Bench Road and at the intersection of the Black Point Road and Mee Canyon Trail will encourage more use of the Black Ridge Canyons WSA. This could cause impacts to visitors by increasing visitor encounters

with other parties within the WSA. For visitors seeking solitude, increased encounters with other parties could be viewed as detrimental. However the proposed new trails and trailhead facilities could help maintain wilderness aesthetics by concentrating visitor impacts into the trail area, and decrease encounters with other parties by dispersing users.

The closure of the lower Black Ridge Road to all motorized vehicles from February 15 to August 15 and gating the road west of Mee Canyon trailhead will serve to help reduce the amount of vehicle trespass into the WSA and thereby reduce the amount of potential resource damage that may occur. Limiting the size of the group travelling to the arches and prohibiting overnight parking in the cherry-stem portion of the access road will help maintain the physical and social environment in the WSA.

Adding newly acquired lands to the WSA in the mouths of Devils Canyon (200 acres), Flume Canyon (280 acres), and along the Colorado River (290 acres) would enhance wilderness values and improve wilderness manageability. Wilderness designation would provide long-term legislative protection on 770 acres which are a natural extension of the wilderness values found in Black Ridge Canyons WSA (73,937 acres). Designating these lands as wilderness would help to preserve the canyons' natural landscapes. Proposed wilderness boundaries in the mouths of the canyons would be easy to define and would assist the visitor in locating boundaries.

Wilderness designation would not occur on 40 acres in Flume Canyon, and on 440 acres in the mouth of Devils Canyon which was determined to be unsuitable for wilderness due to the presence of significant imprints of man (roads, bridges, power lines, and reservoirs).

Impacts to Cultural Resources

Cultural resources have the potential to be impacted by many of the planned management actions. Impacts to cultural resource sites could result from vehicle travel, construction of trails and trailhead facilities, and other surface disturbing activities such as the construction of fireline for prescribed fire. However, all disturbed areas would be inventoried prior to surface disturbance so impacts can be avoided, reduced and/or mitigated.

Initiation of cultural resource education programs (e.g. "Fossil Education Kit") focused on the RCBR area, publicizing rewards to individuals who notify BLM of possible cultural resource vandalism and increased public contact in the RCBR area would cause beneficial impacts by serving to reduce vandalism of cultural resources, while educating the public as to their importance.

Impacts to Transportation and Access

Seasonal closure of the Upper Bench and Lower Black Ridge Roads could cause impacts by hindering vehicle access into some portions of the RCBR ecosystem. Enlarging the single track trail system in Rabbit Valley and in the area north of the interstate would offer expanded opportunities for motorcyclists, mountain bikers and horseback users.

Impacts to Livestock Grazing

Maintaining the DPCs will assure the necessary vegetative diversity for forage and cover for livestock, wildlife, and watershed stability. Direct impacts to livestock grazing centers around the exclusion of livestock from certain areas either prior to or after treatments including fire (PNF or management ignited) and/or reseeding. It may be necessary to exclude livestock for a short period prior to burning to provide the vegetative growth necessary to carry fire through the treatment area. Following fire it may be necessary to exclude livestock to allow establishment or recovery of vegetation. Although cattle may be initially excluded from treatment areas the end result of fire management actions would be an improvement in available forage for ungulate species.

Livestock grazing will continue at the levels currently specified on the grazing permits. Also, based on existing agreements livestock will be excluded from some canyons to protect riparian areas and domestic sheep will be excluded from certain allotments to reduce conflicts with desert bighorn sheep. In conformance with interim guidance for WSAs motorized or mechanical equipment will continue to be authorized on an as-needed basis to occasionally maintain or construct rangeland improvements

Impacts to Vegetation

Management practices such as fire, grazing strategies, reseeding etc. will be designed to achieve the DPC. Managing for the DPC will assure the necessary vegetative diversity required for forage and cover for livestock and wildlife, and watershed stability. In addition, management will be designed to reduce the composition of exotic and weed species and increase perennial vegetation. Riparian vegetation will continue to improve through the existing livestock agreements.

The use of prescribed fire and prescribed natural fire will have the greatest impact to the vegetation. Fire will provide the desired mosaic of vegetative communities and successional stages within these communities. Overall, the density of pinyon-juniper south of the river will be reduced and the presence of early and mid seral stages will

increase exemplified by greater diversity and abundance of annuals, grasses, forbs and shrubs. An increase in annual and weedy vegetation will result from burning but should be short term as perennials recover and increase through the successional process.

Impacts to Wildlife and Special Status Species

Installing six water catchments in the area north of the river would have a direct impact on the distribution of small game. The use of prescribed fire would cause some mortality to nesting birds but would increase the suitability of areas for desert bighorn sheep. Restricting recreational use of trails above cliffs occupied by peregrine falcon eyries will have an indirect beneficial impact on these birds. Increased use of the WSA due to the increased trail system will increase the stress on desert bighorn sheep. Restricting hiking in Devils Canyon during the sheep lambing season in the spring and excluding commercial sheep from some areas will have a beneficial impact on the desert bighorn sheep. An enlarged single track trail system in Rabbit Valley would decrease the productivity of most wildlife species there, but none will be eliminated within the next 25 years. Taking appropriate followup actions, if impacts to wildlife populations from recreation and other human activities are detected, will help eliminate or reduce harassment and adverse consequences. Management practices that help to attain or maintain the DPC will create improvements in the vegetative communities for forage and cover which will have a beneficial impact on most wildlife in the RCBR area.

Most plants that are listed under any of the above classifications have evolved with a specific fire periodicity and corresponding fire intensity. By extending the period between fire visits to habitats, the potential increase in fire intensity is likely to be the most damaging effect to most plant species. Impacts of the PNF Program are not perceived as detrimental.

Likewise, any PNF effect on listed animal species is perceived as short term and not posing an adverse impact. The overall assessment is that the PNF Program would most likely have a beneficial effect whereas continued fire suppression could result in an increased fuel level and fire intensity that could cause long-term adverse effects.

No state or federal endangered, threatened, or candidate species would be directly impacted by the Proposed Action. An exception to this would be if reintroduction efforts are successful, a direct benefit would be realized by black-footed ferrets. No other indirect impacts are anticipated for species currently listed by the State of Colorado or the United States as endangered, threatened or which are candidates for such listing. One currently lightly used single track trail passes through a known stand of the sensitive plant, *Amsonia jonesii*. This stand will be instructive as to the safety of permitting the continued use of this trail and the result of providing more trails that

disperse use. However, the Proposed Action would help to increase habitat diversity in the ecosystem thereby increasing plant and animal species diversity. An indirect impact of implementing the Proposed Action would be the restoration of natural processes in the ecosystem. Restoration should end or slow any trends toward the loss of native ecosystems, food webs, flora and fauna. Thus an indirect beneficial impact would be realized in hopefully restoring special status species habitats, and preventing future listing of additional species.

Adding 480 acres of wilderness in the mouths of Devils and Flume Canyons would help prevent fragmentation of habitat for desert bighorn sheep. Recognition of wilderness boundaries is also aided in this alternative.

Impacts to Geology and Minerals

No indirect impacts to mineral resources were identified. Although the Colorado River corridor is withdrawn and closed to mining claim location and commercial-scale mine development, recreational sluicing and dredging activities may be authorized under permit if the activity falls within specified limitations and can comply with the terms and conditions of the recreational level permit.

Impacts to the Soil, Water and Air

Prescribed fires would cause short term impairment of air quality in the local airshed within and surrounding the RCBR area. The smoke from many prescribed natural fires would be visible from the Grand Valley. The generally good dispersion on the plateaus and ridge areas, coupled with the predominant spring, summer, and fall wind direction shifting generally from the southeast in the morning to the northwest in the evening, would carry the smoke away from the population centers thereby lessening the impact. The actual impact to the air resource would be a function of smoke dispersion; wind direction; size, intensity, duration of the fire(s); number of fires burning at any given time; and location of the fires.

Vehicle travel in the RCBR area from both recreational vehicles and vehicles associated with BLM administered operations in the area would impact air quality through vehicle emissions and dust. However, the impacts from these vehicles would be short term and transitory.

Impacts to soil include initial loss of soil from erosion immediately following prescribed fires in pinyon/juniper and sagebrush/grassland communities, possible modification of organic matter and plant nutrients. The actual impacts is a function of fire intensity, temperature, vegetation type and density, and soil moisture. The soil water storage

capacity and infiltration rate is often reduced following fire. This coupled with intense thunderstorms would accelerate erosion. This short term loss would continue until grass, forb and shrub species are established. As vegetation densities increase, the erosion rates would decrease.

Water quality would decrease immediately following a fire due to increased particulate matter, sediment, and nutrients in the run-off water. Sediment and turbidity are the most significant water quality responses to fire. This impact results primarily from overland flow and secondarily from channel scour. As vegetation becomes reestablished sediment and turbidity impacts would dramatically decrease. Chemical and nutrient impacts would include the loss of nitrogen, phosphorus, potassium, calcium, magnesium, copper, iron, manganese, and zinc in plants and litter as they are volatizated by burning. Metallic nutrient elements like calcium, magnesium, and potassium are converted to oxides and deposited as ash on the soil surface. These oxides are low in solubility until they react with carbon dioxide and water of the atmosphere forming bicarbonate salts. As salts their solubility is substantially increased. Their vulnerability to loss in overland flow or by leaching is thereby increased. The decreased plant cover in the post burn situation increases erosion susceptibility of nutrients. DeByle and Packer (1972)* reported sediment was the primary vehicle for phosphorus, calcium, magnesium, and potassium loss whereas sodium losses were in solution. As more vegetative cover is removed the intensity and duration of nutrient flush is increased. Calcium, magnesium, potassium, and nitrogen compounds could be expected to increase up to fifteenfold in a flushing types action during the first post fire runoff event. These concentrations would decrease rapidly as watershed conditions stabilized. Long term water quality in streams and other wetland areas would be improved by the improvements in vegetation conditions proposed in the plan.

Overland flow (water yield) would generally increase as a result of changes to interception, infiltration, soil moisture storage, snow accumulation, and snowmelt rates. Once vegetation is established in burn areas, water yield would decrease to near preburn levels.

Construction of trails and trailhead facilities in the area south of the river could encourage more use of the area thereby leading to potential erosion caused by increased human use of the trails. Slight compaction of soils would continue to occur along trails and at frequently used campsites and staging areas. The concentration of visitors on trails and designated travel routes would in general have a positive impact on sensitive cryptobiotic soils.

*DeByle, N.V., and P.E. Packer; 1972. Plant nutrient and soil losses in overland flow from burned forest clearcuts. In Watersheds in Transition, Proc. of a symp. sponsored by the Am. Water Resour. Assoc. and Colorado State University, p. 296-307, illus.

Impacts of ALTERNATIVE A - Primitive Recreation Emphasis

Impacts to Recreation and Visual Resources

Recreational users of the area would be directly impacted by this alternative in the following ways. Those individuals wishing to visit the arches above Rattlesnake Canyon would be required to walk an additional three miles to reach the arches. A good portion of this route is downhill in fairly steep terrain. An average day hike to the arches would go from a two to three mile hike to a seven to eight mile hike. Recreational users who enjoy the challenge of reaching the trailhead via 4X4 vehicle would be precluded from experiencing this kind of opportunity both in the cherry-stem portion of the Ute Trail and on the lower Black Ridge Road.

Since the maximum group size allowed on the river in this alternative would be no more than 15 people, including guides, many of the 34 commercial river outfitters who operate on this stretch of the Colorado would be negatively affected financially by this alternative. Approximately two thirds of these outfitters also operate in Westwater Canyon in Utah where the group size limit is a maximum of 25 people (not including guides). This alternative would cut in half the number of people per party allowed on a guided trip. The reduction in the allowable party size would on the other hand likely reduce the amount of total use on the river, which in turn would reduce the amount of encounters with other parties on the river each day. This would reduce the chances for crowding both on the river and at popular camp areas.

Prohibiting the use of power boats and jet skis during the primary float season would benefit floaters desiring a more primitive, non-motorized setting on the river. It would also reduce the potential for conflict between motorized and non-motorized boaters. This alternative on the other hand would markedly reduce the opportunity for floaters desiring to experience the canyon by power boat or jet ski. It would also limit the opportunity to use power boats for river patrols and cleanup operations, and will likely create an increase in motorized use on other nearby river stretches such as the lower Gunnison and Upper Colorado.

This alternative would have a direct, negative impact on mountain bikers who use the Pollock Bench Trail as they would be excluded from riding the trail year round. The exclusion of mountain bikes from this trail would have a positive impact on recreational users who desire a more primitive, non-mechanized setting. It would also reduce the chances for unacceptable resource damage to occur from the creation of spur trails. The existing spur trails would be allowed to recover increasing the naturalness of the Pollock Bench area.

The closure of the Lower Black Ridge Road, and the Ute Trail to motorized vehicles would cause beneficial impacts in the long term to the visual qualities in the RCBR area by reducing unsightly erosion, etc. It would also create reduced access for big game and mountain lion hunters thereby reducing the chances for desired game harvest levels to be met.

Impacts to the Wilderness Study Area

This alternative would have the greatest benefit to the Black Ridge Canyons WSA out of any of the alternatives being considered. By reducing the number of people who recreate on the river, bike on the Pollock Bench Trail, and hike to the Rattlesnake Arches, both physical and social conditions of the wilderness resource would likely improve. Not building trails into certain portions of the WSA would in the long term concentrate visitors on the existing trails, thereby increasing encounters with other parties and reducing the chances for finding solitude. Prohibiting use on the Lower Black Ridge Road would markedly reduce the sights and sounds caused by motor vehicles and thereby improve the chances for finding solitude in this portion of the WSA.

Impacts to Cultural Resources

No further indirect or direct impacts to the cultural resources are anticipated as a result of implementing this alternative. The trailhead facilities needed to accommodate vehicle parking at the end of the Upper Bench Road would be surveyed for cultural material prior to construction.

Impacts to Transportation and Access

This alternative is proposing the most restrictive measures with regard to transportation and access routes out of the three alternatives being analyzed. 4X4 users, mountain bikers, and motorized river users would be negatively impacted by this alternative. Hikers, horseback users and non-commercial river floaters would, in general, be positively impacted. Future opportunities for increasing the trail system in the WSA would be lost thereby decreasing the chances for dispersing use off of existing trails and/or creating new opportunities for realizing targeted benefits.

Impacts to Livestock Grazing

Impacts to livestock grazing would be the same as in the Proposed Action. Ranchers would still be allowed to use a vehicle on the lower Black Ridge Road for range management purposes.

Impacts to Vegetation

The reduction of the allowable group size on the river would lessen the impact that large groups would have on the vegetation in the camp areas. The closing of the Black Ridge Road to motorized vehicles would also reduce the potential impacts to vegetation from vehicles driving off of the designated route. No vegetation would be disturbed as a result of new trail construction.

Impacts to Wildlife and Special Status Species

The impacts to wildlife and special status species would be the same as in the Proposed Action with the following exceptions. The reduction of motorized water craft would result in fewer disturbances to the wildlife species that inhabit the river corridor (geese, bald eagles, etc.). The reduction of the maximum allowable group size on the river may increase the frequency of disturbance as large groups breakup into more groups. Fewer trails in the WSA would also offer greater protection for other wildlife species (mule deer, desert bighorn sheep).

Impacts to Geology and Minerals

Impacts to geology and minerals are the same as under the Proposed Action.

Impacts to Soil, Water and Air

The impacts described for the Proposed Action would occur under this alternative with the following exceptions.

Vehicle travel on the Black Ridge Road associated with recreational use and BLM administered operations would not be as extensive as under the Proposed Action. The impacts to air quality from dust and vehicle emissions, although short term and transitory, would, therefore, be less. The potential for soil erosion to occur, particularly on the Ute Trail, would be reduced. The reduced amount of use in general would decrease the probability of negatively impacting cryptobiotic soils.

Impacts of ALTERNATIVE B - No Action

Impacts to Recreation and Visual Resources

An impact to recreational users of the area would be that guidance and interpretation provided by BLM and its partners, to allow users to make informed decisions about destinations and benefit opportunities in the RCBR area would be unavailable. Users would not be directed to appropriate destinations matching their skill level or desired benefits. Not implementing the Benefits Based Monitoring and Limits of Acceptable

Change process will result in less measuring of the condition of biophysical and social elements in achieving desired outcomes and benefits for RCBR visitors. A more uniform and homogenous approach will be used in managing the RCBR area for recreation opportunities as a result of not implementing the management prescriptions in Chapter 5 of the plan as compared to the diversity and variety of recreation benefit opportunities that will potentially occur as a result of implementing Alternative A.

More impacts could occur to resource values as a result of not providing more information on minimum impact camping available to visitors. Additional long term indirect impacts to recreational users includes the continuation or perpetuation of unacceptable campsite, trail and road conditions as well as the potential for increased encounters with other groups both on area trails and on the river. The aesthetics of the area could be changed significantly due to large wildfires.

This alternative would have the least impact on users seeking to use the Black Ridge Road and the Upper Bench Road for access to the Arches, as both roads would be open year round to motorized vehicles. The lack of any limit on group sizes in certain areas, as well as not having any restrictions on camping along the Ute Trail would, in general, increase the chances for negative resource impacts to occur in some areas. In general, this alternative would have less chance of improving visitor experiences and realizing targeted benefits in the RCBR area than Alternative B and the Proposed Action.

Impacts to the Wilderness Study Area

Of the three alternatives, Alternative C would have the greatest potential indirect impact to the WSA. Keeping the Black Ridge Road open year round would increase the chances for vehicle trespass into the WSA and potential resource damage caused by car camping adjacent to the Ute Trail. Not having limits on the size of parties visiting the Arches could eventually lead to crowding in this popular area of the WSA.

Non-designation of 770 acres of newly acquired lands in the mouths of Devils and Flume Canyons and along the Colorado River could lessen the overall wilderness character of the WSA and make its manageability for wilderness more difficult. Physical boundaries of proposed wilderness in the mouths of Devils and Flume Canyons would not be well-defined. The opportunity to preserve the canyons as wilderness in their entirety could be lost.

Impacts to Cultural Resources

Cultural resources would not be directly impacted from surface disturbance associated with implementation of the no action alternative. Cultural resource education programs

focused on the RCBR area would not be initiated. Other methods to reduce vandalism and increase awareness of cultural resources in the RCBR area would also not be initiated. As a result, cultural resources would be indirectly, negatively impacted by adoption of this alternative.

Impacts to Transportation and Access

This alternative is the least restrictive in terms of transportation and access of the three alternatives. No restrictions would be placed on use of the Upper Bench Road and the Black Ridge Road. The area north of Rabbit Valley and I-70 would remain open to motorized vehicles on existing roads and trails rather than restricted to designated routes. Since less attention would be paid to maintaining roads and trails in relation to the recreation setting guidance, direct, beneficial impacts to visitors seeking a particular access route that matched their skill level would be reduced.

Impacts to Livestock Grazing

Permitted livestock use and existing livestock agreements would continue under this alternative. Under this alternative livestock would not be temporarily excluded from certain areas for fire management purposes. The greatest impact to livestock grazing would be the impacts to vegetation as described below.

Impacts to Vegetation

Under this alternative there would be no DPC description or landscape goal. Without this description a common focus for management of the vegetative communities would not exist resulting in less intensive and sometimes conflicting actions.

The lack of intensive management would be the greatest impact to vegetation. Progress towards increased diversity of vegetative community types and seral stages within these types would be slowed considerably as well as the focus to decrease annuals and exotic species. The benefits to wildlife, livestock and overall watershed stability would be decreased.

Impacts to Wildlife and Special Status Species

Wildlife would be indirectly impacted by the no action alternative because greater habitat diversity would not be created in the RCBR area. In addition, catastrophic fire, and the associated loss of wildlife habitat and life, due to the continued build-up of fuels would be an indirect impact. Forgoing the installment of six water catchments in the area north of the river would reduce the chances of better dispersing small game. Not restricting recreational use of trails above peregrine falcon eyries would cause abandonment of the sites and possible loss of years production resulting in a negative impact on the birds. Likewise, not restricting hiking in Devils Canyon during the spring

lambing season could potentially have a negative impact on the desert bighorn sheep. The delay of the future delisting of the black-footed ferret, through restoration efforts would occur due to this alternative.

Less education of the public focusing on the wildlife and rare plants of the area would occur under this alternative. As a result, there would be little to no lessening of the destruction of kangaroo rat burrows by uninformed users, no reduction of rock rolling over peregrine falcon eyrie cliffs, and no increased ability of recreationists to identify anxious behavior in nesting birds or to recognize rare plants to enjoy in place.

Impacts to Geology and Minerals

No impacts to mineral resources were identified.

Impacts to Soil, Water and Air

The impacts described for the Proposed Action would occur under this alternative with the following exceptions.

Vehicle travel in the RCBR area associated with BLM administered operations would not be as extensive as under the Proposed Action and Alternative A, thus impacts to air quality from dust and vehicle emissions, although short term and transitory, would be less. Air quality impacts described for the preferred alternative would be more severe due to the larger more intense wildfires from increased fuel loading south of the river. Soil erosion, water quality, and water yield impacts would be correspondingly increased.

Cumulative Impacts

To properly determine cumulative impacts Reasonably Foreseeable Future Action (RFFA) analysis as referenced in 40 CFR 1508.7 should be used. These are projections made so that future impacts can be estimated as required by the National Environmental Policy Act. For the purposes of this analysis, it is assumed that all Proposed Actions described in the RCBR plan would be initiated.

Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time. Seemingly insignificant actions can add up (more and more of the same type of action) to cause negative influences on the environment. Due to the number and variety of Proposed Actions in the Ruby Canyon/Black Ridge Plan, a relatively detailed cumulative impact analysis is necessary.

Cumulative Impacts of the Proposed Action

The increased use of roads by vehicles and equipment in order to achieve identified objectives in the RCBR plan and resultant short-term disturbances from initiation of certain management actions should be considered from a cumulative impact standpoint. The initiation of management actions to reach RCBR BBM objectives could create cumulative impacts. Resources which could be adversely affected include: recreation, visual, air quality, cultural and wildlife resources. Also many positive impacts would accrue from the achievement of BBM objectives.

It is recognized that fire has and always will be an influencing factor in ecosystems. One can visualize fires burning during relatively mild burning conditions existing primarily as low intensity ground surface fires or those burning during drier warmer conditions exhibiting various intensities. The size of area affected by each type of fire would also vary although the trend would be for larger areas to be affected during the warm drier conditions.

Negative cumulative impacts from prescribed natural fires south of the river would affect recreation, air quality and visual resources similarly. Should several small but collectively significant or one large burn be initiated, these resources would be affected primarily through the creation of visual contrasts which may not be compatible with visitor use and visual resource management zones. The negative, cumulative impacts would result immediately from prescribed burns and associated vehicle and equipment travel on roads. These impacts would be offset and negated by long term indirect impacts resulting from increased vegetation diversity, soil stability and movement toward a more natural ecosystem. Additive negative cumulative impacts could affect wildlife resources as a result of carrying out actions to meet fire management objectives in the RCBR plan. Prescribed natural fires south of the river during breeding, nesting, and brooding seasons could be detrimental to wildlife (especially avian species). If the incidence of fire over the majority of the area increases it will cause bighorn sheep habitat to approach (Pre-Columbian) conditions, a positive result for the big horns.

Negative cumulative impacts could affect cultural resources, in spite of mitigation, should the various management prescriptions designed to meet the fire management goals of the RCBR plan be carried out. Additive negative cumulative impacts to future identification and dating of artifacts and features could occur. Negative cumulative impacts could also result from increased recreational interpretation and associated use of the RCBR cultural and paleontological sites. Increased use of the area could result in more vandalism to cultural resources.

It is estimated by professional judgment, by interpreting fire history, that a least 10 fires start within the RCBR area each fire season. Fires are integral in this part of the State of Colorado and the Rocky Mountain Region in that certain species require severe disturbance periodically in order that they may be rejuvenated and/or to compete against other successional species. Recognizing this is important to managers of the RCBR Fire Management Area. Certain risks may be presented to the manager by not implementing a PNF program for the area. Often these risks are not apparent because of subtle differences occurring in fire dependent ecosystems when fire suppression is implemented. The risks associated with not implementing a PNF Program are virtually the same as those identified with the implementation of a PNF Program, as a wildland fire can cause the same impacts. The challenge is to manage wildland fire and/or PNF carefully to minimize as many of the risks as possible, and to mitigate the impacts as much as practical.

If ignitions are continually suppressed, the potential associated with increased fuel buildup and damaging wildland fires could result in greater risks to resource management objectives, wildland fire escapes, and public safety.

Cumulative Impacts of Alternative A - Primitive Recreation Emphasis

The negative cumulative impacts associated with implementing Alternative A are very similar in nature to those described for the Proposed Action with the following exceptions. The cumulative affect of implementing the management actions as proposed in Alternative A would have a more positive affect on the wilderness resource in general. Decreasing group size on the river, prohibiting power boats and jet skis on the river during the main use season, prohibiting mountain bikes on the Pollock Bench Trail, and closing the Black Ridge Road year round to motorized vehicles would all contribute to a more pristine wilderness environment in the eastern portion of the WSA.

This area of the RCBR ecosystem is also closest to the Grand Valley's population centers and is likely to experience enormous pressures to provide additional recreational opportunities in the near future. The cumulative impact of not building any further trails in the WSA, while providing for the greatest protection of the physical resource, would likely have a detrimental impact on the social experience as more and more users crowd onto the existing trail network.

Cumulative Impacts of Alternative B - No Action

Cumulative impacts of the no action alternative would result from current management (or lack thereof). By continuing the current level of management within the RCBR ecosystem, vegetation and wildlife resources would experience negative cumulative impacts resulting from neglect (or lack of management) rather than by specific management actions.

Recreation and visual resources would experience negative cumulative impacts through adoption of the no action alternative. With no increase in vegetation diversity, nor reduction of erosion, and no targeting of recreational activities, and benefits, improvement in recreational opportunities, viewsheds and naturalness would not increase in the long term.

Wildlife resources would experience negative, indirect cumulative impacts through the adoption of the no action alternative. Without reintroduction of fire into the ecosystem, there would continue to be an un-qualified risk of catastrophic wildfire, which could destroy significant blocks of wildlife habitat. This risk would increase over time as fuels continue to build up. All fires under this alternative will be under prescription.

Cumulative impacts may last for many years beyond the life of the action that caused the impacts. Such impacts may not be immediately apparent but may take years to manifest themselves. Adoption of the no action alternative would result in such impacts.

Mitigation Measures for the Proposed Action

1. To mitigate direct impacts to air quality from the use of prescribed fire, prescription parameters dictated by the State of Colorado through the issuance of a Smoke Permit will be followed.

To maximize visitor safety and use in areas affected by a prescribed natural fire, a public safety plan will be developed for all fires affecting public facilities such as trailheads, trails, and campsites. Public safety items and items of concern will also be included in the prescribed natural fire burn plan, and reinforced through signing and public contacts at trailheads, trails or campsites (as conditions/needs warrant).

Any commercial users or operators (outfitters or grazing permittee) in the area will be informed of the start and progress of a PNF(s) in their respective areas. Those expected to operate within or near the projected Maximum Manageable Area (MMA) will be notified immediately and be given the best estimation/probabilities when the fire may impact them or their operation using the risk assessment analysis. Upon notification, it is the user's responsibility to remove their equipment, livestock, or evacuate their location.

Rather than limit the area affected by fire at any one time, the Resource Area may consider other limitations they want in place. These could include the number of trails affected at one time, etc. No guidelines are written for these decisions because these will be determined on a case by case basis. Heavily used areas need and will have fire in them at some time but it is appropriate to consider how much should burn in any one year or decade. Signs warning of the hazards of fire, snags, smoke, trail conditions, and campsite availability will be considered as conditions warrant.

2. To mitigate indirect impacts regarding human use of existing and new trails in the RCBR area, trail conditions will be monitored frequently (a minimum of annually), and appropriate maintenance will be completed as needed.

3. To mitigate direct impacts to visitors from the closure of roads, limiting groups sizes, requiring trail and river corridor use permits, and closing some areas to camping (all to reduce the chances of unacceptable resource damage occurring), public involvement would be required in the decision making process when specifics of these actions are known.

4. To mitigate direct impacts to visual resources from the use of prescribed fire, boundaries of the burn areas would be irregular, stumps would be cut low, slash would be removed from the site and/or burned and areas would be reseeded where necessary.

5. To mitigate direct impacts to cattle grazing resulting from exclusion of cattle from burn areas, cattle will be excluded from burn areas only where possible, not entire pastures. Plans for exclusion of cattle from specific areas for revegetation purposes or to allow fine fuels to build up in order to carry prescribed fires will be coordinated with grazing permittees well in advance.

6. Negative direct, indirect and cumulative impacts to future federally listed species would be eliminated or avoided through the Endangered Species Act's Section 7 Consultation process.

Residual Impacts

No residual, significant adverse impacts from the Proposed Action would remain after application or implementation of mitigation measures.

V. CONSULTATION AND COORDINATION

Persons and Agencies Consulted:

The following persons have participated as members of the Ad hoc committee throughout the creation of the RCBR Plan.

Name	Affiliation/Interest
Brenda Sabo	Audubon Society
Yeulin Willett	River Front Commission
Hawk Greenway	Rancher
Warren Gore	Rancher
Bill Hamann	Colorado Mountain Club
Jann Ertle	Grand Junction Chamber of Commerce
Rick Corbin	Colorado Plateau Mountain Bike Trail Assoc.
Curt Lane	Colorado Plateau Mountain Bike Trail Assoc.
Jim Majors	Colorado Plateau Mountain Bike Trail Assoc.
Derek Firth	Motorcycle Trail Riders Assoc.
Tom Klienschnitz	River Outfitter
Debbie Kovalik	Grand Junction Visitor & Convention Bureau
David Blair	Aid, Senator Ben Nighthorse Campbell
Keith Fife	Mesa County Planning Department
Bill Schapley	Sierra Club, Uncompahgre Chapter
Danni Langdon	Interested citizen
Jan McLean	Museum of Western Colorado
John Schneiger	City of Fruita
Helen Traylor	Audubon Society
John Schler	Department of Local Affairs
Steve Yamashita	Colorado Division of Wildlife
Steve Hickman	National Park Service, Colorado National Monument
Cathie Zarlingo	Resource Advisory Council

Reviewers Names (Signatures), Title:

Harley Metz	Ecologist	6/11/97 Date
Jim Dollerschell	Range Specialist	6-13-97 Date
Joe-Riley Epps	Fire & Range Specialist	6-13-97 Date
Tom Bargsten	Soil Scientist	6-13-97 Date
Ron Lambeth	Wildlife Biologist	6-13-97 Date
Harley Armstrong	Paleo/Archaeologist	6-13-97 Date
Wade Johnson	Wilderness Specialist	6-13-97 Date
Dave Stevens	NEPA Compliance	6-13-97 Date
Jim Scheidt	Hydrologist	6-13-97 Date

Preparer Name (Signature), Title, Date:

Joe Ashor	Outdoor Rec. Planner	6-11-97 Date

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